

REMARKS

Claims 1-6, 9, 13-18 and 20-25 are pending in the current application, while claims 1-9 and 11-25 stand currently rejected. Claims 7-8, 10-12 and 19 are cancelled, and claims 1, 2, and 9 have been amended.

Discussion of Example Embodiment

In at least Applicants' FIG. 3, Applicants disclose a "valve seat" 13 provided within a "main body" 1. The valve seat 13 is an integral part of the main body 1, as opposed to being a part of a middle body, a main valve member 22, or otherwise an integral part of the stemming or other internal valve components.

In at least Applicants' FIGS. 8 and 9, Applicants disclose a main body 1a with an outer circumferential surface that is thread-engaged with an inner circumferential surface of a receiving member 8a. The main body 1a is directly thread-engaged with the receiving member 8, as opposed to a middle body being separately thread-engaged with both a receiving member 8 and a main body 1a. Additionally, the receiving member 8 and the main body 1a have a contact portion 1b other than a thread-engaged portion, where the contact portion 1b is "tapered" at a position above the thread-engaged portion (see, the contact surface between 8a and 1b of FIG. 8).

In at least Applicants' FIG. 9, Applicants disclose a bush 10 including a main body 10a, a threaded mechanism 10b provided on one-side in the axis direction, and a thread-advance preventing portion 10c provided on the other side in the axis direction projecting outward in a radial direction to engage with a cylinder insert portion.

Rejections – 35 U.S.C. § 112, Second Paragraph

Claim 12 is rejected under 35 U.S.C. § 112, Second Paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed.

Applicants have cancelled claim 12 and included the claim 12 limitations in currently amended claim 9. Thus, withdrawal of the rejection is requested.

Rejections – 35 U.S.C. § 102

Claims 1-3, 5-7, 9, 13-15 and 17-25 are rejected under 35 U.S.C. § 102(b) as being anticipated by Higaki et al. (JP 10-339383). This rejection is respectfully traversed.

With regard to this rejection, and the other rejections cited by the Examiner, Applicant submits that the Examiner's rejection is flawed from the standpoint that the Examiner does not provide an element-by-element comparison of the cited art against Applicant's claim limitations. Such general rejections make Applicants' response difficult, as the specific elements of the cited art are not being asserted against each of the limitations included in Applicants' claims.

Regarding independent claims 1 and 2, Applicants have amended these claims by moving the limitations of dependent claims 7 and 8 into these independent claims. The Examiner asserts that Higaki et al. (JP 10-339383) teaches all of the limitations of independent claims 1 and 2. Applicants assert that Higaki does not teach at least "a main body provided with a valve seat". Applicants further assert that Higaki does not teach at least "an outer circumferential surface of an upper end of the main body and the inner circumferential surface of the receiving member are threaded ... and the receiving member is constituted so as to be thread-engageable with the upper end of the main body" or "wherein the receiving member and the main body have contact portions other than engaged portions, which contact portions are formed to be tapered at a position above the engaged portions".

With regard to FIGS. 7 and 8 of Higaki, as cited by the Examiner, Higaki teaches a middle body 10 integrated within the main body 1 by thread-engaging the middle body 10 within the inside of the main body 1. Higaki's valve seat 13 is an integral component of the middle body 10, such that the valve is assembled by sliding the middle body 10 (which includes valve member 2, valve head 22, valve seat 13 and all other internal valve components) into main body 10. Therefore, Higaki does not teach a "main body" that is "provided with a valve seat", because the "valve seat" is instead provided within the middle body 10 which is then placed within main body 1.

Additionally, Higaki teaches a receiving member 3 that is thread-engaged with the middle body 10, the middle body 10 being thread-engaged with the main body 1. Therefore, Higaki does not teach an "upper end of the main body" and a "receiving member" that are "threaded so as to correspond to each other", because the main body 1 and the receiving member 3 are both thread-engaged with the middle body 10 as opposed to being thread-engaged to each other. Furthermore, Higaki does not teach a "tapered" contact portion "other than engaged portion" that is "at a position above the engaged portions".

Regarding claim 9, the Examiner asserts that Higaki teaches all of the limitations of this claim. Applicants assert that Higaki does not teach at least an insert reinforcing means including "a main body portion provided between both sides in the axis direction of a boundary between the housed portion and the exposed portion" and "a thread-advance preventing portion provided on the other side in the axis direction of the boundary, to prevent the main body portion from advancing while being threaded". As depicted in Higaki's FIG. 1, a reinforcement ring 11c is screwed into nozzle portion 11, such that the ring 11c only reinforces the nozzle 11 by increasing nozzle 11's thickness. Higaki does not teach a "thread-advance preventing portion", where the "thread-advance preventing portion is formed integrally with the main body portion and projects outward in a radial direction", as Higaki's

reinforcement 11c is simply a ring with a thickness devoid of any radially projecting “thread-advance preventing portion”.

For at least the reasons stated above relating to independent claims 1, 2 and 9, Applicants believe these claims to be patentable. For at least the same reasons relating to dependent claims 3-6 and 13-25, Applicants believe these claims to be patentable. Thus, withdrawal of this rejection is requested.

Rejections – 35 U.S.C. § 103

Examiner rejects claims 4 and 16 under 35 U.S.C. § 103(a) as being unpatentable over Higaki. Examiner asserts that it would have been obvious to make the valve head strong enough for its intended service, including the recited tensile strength. This rejection is respectfully traversed.

Applicant believes that the Examiner’s asserted knowledge of a person of ordinary skill in the art would not make the claims unpatentable, for at least the same reasons stated above regarding the patentability of independent claims 1 and 2. Thus, withdrawal of the rejection is requested.

Examiner rejects claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Higaki in view of JP 55-20103. Examiner asserts that it would have been obvious in view of the JP ‘103 document to provide tapered abutting surfaces on cap 3 and the main body of Higaki in order to provide an additional seal to the O-ring 8. This rejection is respectfully traversed.

Applicant has amended independent claims 1 and 2 to include the limitations of dependent claim 8 within these independent claims. Regarding claim 1 and 2, JP 55-20103 does not teach or suggest “an outer circumferential surface of an upper end of the main body and the inner circumferential surface of the receiving member are threaded so as to correspond to each other, and the receiving member is constituted so as to be thread-

engageable with the upper end of the main body”. JP 55-20103 teaches a valve main body 2 and a pressing screw 26 that is thread-engageable, such that the *inner* (not *outer*) circumferential surface of the main body 2 mates with the *outer* (not *inner*) circumferential surface of the pressing screw 26. Furthermore, JP 55-20103 does not appear to teach a “receiving member”, as neither the main body 2 nor the pressing screw 26 is a “receiving member”.

Because JP 55-20103 does not teach a “receiving member” and because JP 55-20103 does not teach or suggest “an outer circumferential surface of an upper end of the main body and the inner circumferential surface of the receiving member are threaded so as to correspond to each other”, Applicants assert that it would not have been obvious for a person of ordinary skill in the art to alter Higaki’s receiving member 3 and middle body 10 in order to teach or suggest “the receiving member and the main body” with “contact portions... formed to be tapered at a position above the engaged portions”.

For at least the reasons stated above, Applicants believe claims 1 and 2 to be patentable. Thus, withdrawal of the rejection is requested.

Examiner rejects claim 11 under 35 U.S.C. § 103(a) as being unpatentable of Higaki in view of Kabushiki (JP 3058841). Examiner asserts that it would have been obvious to provide a reinforcing insert as taught by Kabushiki to the inlet of the Higaki device for strength. This rejection is respectfully traversed.

Applicants have amended claim 9 to include the limitations of previous claims 11 and 12. Applicants assert that both Higaki and Kabushiki (even assuming *arguendo* that they could be combined) do not teach or suggest at least a “thread mechanism portion ... formed integrally with the inner circumferential portion of the cylinder insert portion, and an outer threaded portion that is formed integrally with the outer circumferential portion of the main body portion and that is thread-engaged with the inner threaded portion”. As depicted in

FIG. 1 of Higaki, reinforcement ring 11c does not teach a “thread mechanism”, as only a reinforcement ring 11c with a thickness is shown. As depicted in FIG. 2 of Kabushiki, insert 20a does not include a “thread mechanism” with an “inner threaded portion” and an “outer threaded portion”, as it appears that no “thread mechanism” exists in FIG. 2. Even if the unnumbered element located below the valve seat (shown in hatch-marks) is regarded as a “thread mechanism”, the element does not appear to have an “inner thread portion” that is “formed integrally with the... cylinder” or an “outer threaded portion” connected to the “main body”. Rather, FIG. 2 appears to indicate a “main body” threaded to the inside of the valve inlet, and an extension attached to the “main body” which travels up to the valve seat but which is not threaded to “the inner circumferential portion of the cylinder”. In short, no “thread mechanism” appears to exist, in Kabushiki FIG. 2.

Assuming *arguendo* that Kabushiki can be combined with Higaki (Applicants do not admit that these references may be combined), Applicants assert that this combination still would not teach claim 11, as neither Kabushiki nor Higaki teach or suggest at least a “thread mechanism”.

For at least the reasons stated above relating to independent claim 11, Applicants believe this claim to be patentable. Thus, withdrawal of this rejection is requested.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of claims 1-9 and 11-25 in connection with the present application is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Donald J. Daley at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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